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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/772,422

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Chul-min Kim

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STAAS & HALSEY LLP

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EXAMINER

CHEN, SHIN HON

ART UNIT

PAPER NUMBER

2131

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/772,422

Applicant(s)

KIM ET AL.

Examiner

Shin-Hon Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4/26/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-18 have been examined.

#### Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishna et al.

U.S. Pat. No. 6477646 (hereinafter Krishna) in view of Calderon et al. U.S. Pub. No.

20030225991 (hereinafter Calderon).

4. As per claim 1, Krishna discloses an apparatus for deciphering a variable width cipher data packet comprising: a variable width-fixed width cipher data packet conversion unit which, if a fixed width is a width of a cipher data packet to be processed in a deciphering process and is a multiple of a variable width, which is a width of an arbitrary cipher data packet input by an arbitrary interface module, the variable width-fixed width cipher data packet conversion unit sequentially receives a number of variable width cipher data packets (Krishna: column 5 lines 12-25: convert a smaller variable length packet into a fixed length packet); and a deciphering unit which decipheres the fixed width cipher data packet output from the variable width-fixed width cipher data packet conversion unit to generate a fixed width data packet and outputs the fixed width data packet (Krishna: column 5 lines 21-25: recombine the cells into packets).

Krishna does not explicitly disclose the number of which being the same as that of a combination

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value, which is obtained by dividing the fixed width by the variable width, combines the number of sequentially input variable width cipher data packets received to generate a fixed width cipher data packet and outputs the fixed width cipher data packet. However, Calderon discloses combining smaller variable length packets into a fixed size packets and the fixed sized packet is not processed until the sufficient number of smaller variable length packets are combined (Calderon: figure 7 and [0036]). It would have been obvious to one having ordinary skill in the art to encipher/decipher packets in fixed length because they are analogous art that disclose converting variable size packets into fixed length size packet. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Calderon within the system of Krishna because it increases memory access efficiency for packet applications.

5. As per claim 2, Krishna as modified discloses the apparatus of claim 1. Krishna as modified further discloses wherein the variable width-fixed width cipher data packet conversion unit divides the fixed width data packet output from the deciphering unit into the number of variable width data packets, the number of which being the same as that of the combination value, to generate the number of variable width data packets, and sequentially outputs the number of the generated variable width data packets (Calderon: figure 7 and [0036]).

6. As per claim 3, Krishna as modified discloses the apparatus of claim 1. Krishna as modified further discloses wherein if the variable width is a multiple of the fixed width, the variable width-fixed width cipher data packet conversion unit receives the variable width cipher

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data packet, divides the received variable width cipher data packet into a number of fixed width cipher data packets, the number of which being the same as that of a separation value, that is obtained by dividing the variable width by the fixed width to generate the number of fixed width cipher data packets, and sequentially outputs the number of fixed width data packets generated, and the deciphering unit decipheres the number of fixed width cipher data packets output from the variable width-fixed width cipher data packet conversion unit to generate the number of fixed width data packets, the number of which being the same as that of the separation value, and outputs the number of fixed width data packets generated (Krishna: column 5 lines 12-25).

7. As per claim 4, Krishna as modified discloses the apparatus of claim 3. Krishna as modified further discloses wherein the variable width-fixed width cipher data packet conversion unit sequentially receives the number of fixed width data packets output from the deciphering unit, combines the number of fixed width data packet to generate a variable width data packet and outputs the variable width data packet (Krishna: column 5 lines 12-25).

8. As per claim 5, Krishna as modified discloses the apparatus of claim 1. Krishna as modified further discloses wherein the deciphering unit comprises: a fixed width cipher data packet storage unit which stores the fixed width cipher data packet generated in the variable width-fixed width cipher data packet conversion unit; a fixed width-deciphering width cipher data conversion unit which converts the fixed width cipher data packet stored in the fixed width cipher data packet storage unit into deciphering width cipher data; a deciphering width cipher data deciphering unit which decipheres the deciphering width cipher data converted in the fixed

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width-deciphering width data conversion unit to generate deciphering width data; a deciphering width-fixed width data packet conversion unit which converts the deciphering width data generated in the deciphering width cipher data deciphering unit into the fixed width data packet; and a fixed width data packet storage unit which stores the fixed width data packet converted in the deciphering width-fixed width data packet conversion unit (Krishna: column 5 lines 12-37: the cryptographic operation is applied on the fixed length packet and converted back into packets).

As per claim 6, Krishna as modified discloses the apparatus of claim 5. Krishna as modified further discloses wherein: if the deciphering width data is generated, the deciphering width cipher data deciphering unit generates and outputs a deciphering completion signal; the deciphering unit further comprises: a deciphering control unit and if the deciphering completion signal output from the deciphering width cipher data deciphering unit is received, generates and outputs a fixed width-deciphering width conversion signal, and if the fixed width-deciphering width conversion signal output from the deciphering control unit is received, the fixed width-deciphering width cipher data conversion unit converts the fixed width cipher data packet stored in the fixed width cipher data packet storage unit into the deciphering width cipher data (Krishna: column 5 lines 12-37).

9. As per claim 7-18, claims 7-18 encompass the same scope as claims 1-6. Therefore, claims 7-18 are rejected based on the same reason set forth above in rejecting claims 1-6.

### **Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimoyama U.S. Pub. No. 20010019610 discloses inputting memory capacity of a cryptographic device and minimum unit size to determine the number of equally divided unit can be processed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

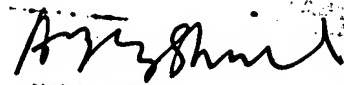
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shin-Hon Chen  
Examiner  
Art Unit 2131

SC

  
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SUPERVISORY PATENT EXAMINER  
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